Amendments to and Listing of the Claims

1. (Currently Amended) A method for sterilizing industrial products comprising, in combination, the steps of conditioning an industrial product to be sterilized by placing the product in a single chamber, first evacuating ~~the~~ said single chamber, to a pressure of from 1 to 4 inches of mercury, adding pulsing steam and/~~or~~ heated inert gas into ~~the~~ said single chamber, to increase chamber pressure by at least 2 inches of mercury and re-evacuating ~~the~~ said single chamber by pulling said inert gas from said chamber by 2 inches of mercury to value of first evacuating, and sterilizing said product by injecting a sterilent gas into ~~the~~ said single chamber to raise said chamber pressure by at least 9 inches of mercury with from 150 to 550 mg/l of sterilent gas;

introducing an overpressure of inert gas into ~~the~~ said single chamber in the range of from 5 to 15 inches of mercury;

holding the product in ~~the~~ said single chamber for a dwell time determined for product being sterilized until the products is sterilized;

at initiation of dwell time, adding an inert gas overlay of an inert gas blanket overpressure for duration of said dwell time in the range of from 5 to 15 inches of mercury;

degassing the product by a gas wash comprising an inert gas and/or steam and by evacuating said chamber to a pressure of less than 3 inches of mercury and re-pressurized with inert gas to a pressure of from less than 3 to up to 55 inches of mercury with necessary repetitions of evacuating and re-pressuring said chamber to degas the product;

releasing said degassed product after the steps of conditioning the product, sterilizing said product, and de-gassing said product are completed to validated process parameters which render to said product specific product and process evidence of appropriate level of lethality and residual reduction.

2. (Currently Amended) The method for sterilizing said industrial products of claim 1 wherein ~~the~~ said inert gas is Nitrogen and wherein ~~the~~ said inert gas is ethylene oxide.

3. (Currently Amended) The method for sterilizing industrial products of claim 1 further comprising the step of evacuating ~~the~~ said single chamber after holding the product in ~~the~~ said single chamber and pulsing in steam and/or heated inert gas into ~~the~~ said single chamber.

4. (Original) The method for sterilizing industrial products of claim 3 wherein the heated insert gas is Nitrogen and wherein the sterilent gas is ethylene oxide.

5. (Currently amended) The method for sterilizing industrial products of claim 4 wherein the evacuating of ~~the~~ said chamber results in the pressure in the range of 1 to 3 inches of mercury, said evacuation of ~~the~~ said chamber includes the step of real-time monitoring said concentration of ethylene oxide gas in the headspace.

6. (Currently Amended) The method for sterilizing industrial products of claim 3 wherein the step of degassing the product is accomplished by evacuating ~~the~~ said single chamber, pressurizing ~~the~~ said single chamber with 3 to 50 inches of mercury with an inert gas, and repeating until the product is degassed.

7. (Currently Amended) The method for sterilizing industrial products of claim 3 wherein the step of degassing the product is accomplished by evacuating ~~the~~ said single chamber down to 3 to 7 inches of mercury and pulsing ~~the~~ said single chamber with 5 to 9 inches of heated inert gas.

8. (Currently amended) The method for sterilizing industrial products of claims 6 ~~and~~ or 7 wherein the step of degassing the product is further accomplished by injecting ~~the~~ said single chamber with warm air.

9. (Cancelled).

10. (Currently amended) The method for sterilizing industrial products of claim ~~9~~ 5 wherein the step of degassing the product is accomplished by evacuating ~~the~~ said single chamber,

pressurizing ~~the~~ said single chamber with 3 to 50 inches of mercury with Nitrogen, and repeating until the product is degassed.

11. (Currently amended) The method for sterilizing industrial products of claim ~~9~~ 5 wherein the step of degassing the product is accomplished by evacuating ~~the~~ said single chamber down to 3 to 7 inches of mercury and pulsing ~~the~~ said single chamber with 5 to 9 inches of heated Nitrogen.

12. (Currently amended) The method for sterilizing industrial products of claims 10 ~~and~~ or 11 wherein the step of degassing the product is further accomplished by injecting ~~the~~ said single chamber with warm air.

13. (Currently Amended) The method of claim 6 wherein evacuating ~~the~~ said single chamber as a part of degassing the product is performed at a rate in the range of 0.1 to 0.5 inches per minute.

14. (Currently Amended) A method for sterilizing industrial products comprising, in combination, the steps of:

conditioning an industrial product to be sterilized by placing the product in a single chamber, evacuating ~~the~~ said single chamber, pulsing steam and/or heated inert gas into ~~the~~ said single chamber, to raise the temperature of the product and/or introduce humidity into said chamber to facilitate said sterilization reaction;

sterilizing said industrial product by injecting ethylene oxide gas into ~~the~~ said single chamber;

introducing 5 to 15 inches of mercury of Nitrogen overpressure into ~~the~~ said single chamber;

holding the product in ~~the~~ said single chamber while the product is sterilized;

evacuating ~~the~~ said single chamber to a pressure of 1 to 3 inches of mercury;

pulsing in stream and/or heated Nitrogen of 130° to 170° into ~~the~~ said single chamber, and injecting ~~the~~ said single chamber with warm air;

degassing the product after evacuating said chamber by a gas wash comprising injection of steam with a number of repeats without specified hold time;

releasing the degassed product after steps of conditioning the product, sterilizing the product, and degassing the product to specific product parameters;

15. (Currently Amended) The method of claim 14 wherein evacuating ~~the~~ said single chamber to a pressure of 1 to 3 inches of mercury is done at a rate of 0.1 to 0.5 inches per minute.

16. (Currently Amended) The method for sterilizing industrial products of claim 15 wherein the step of pulsing in steam and/or heated Nitrogen into ~~the~~ said single chamber is repeated one or more times.